IN THE CLAIMS:

This listing of claims will replace all prior versions and listing of claims in the application:

Listing of Claims:

1. (currently amended) Imaging method for nuclear magnetic resonance, ~~wherein~~ comprising applying a constant static magnetic field ~~acts~~ upon a sample, ~~wherein~~ applying an additional magnetic field ~~is~~ superimposed on the static magnetic field, the additional field having, in at least one grating surface within the sample volume, different field strength values at each point of the grating surface, ~~wherein~~ exciting the sample ~~is excited by~~ with a high-frequency electromagnetic alternating field, and ~~wherein the~~ reading and evaluating electromagnetic radiation emitted from the excited sample ~~is read out and evaluated for generating~~ to generate images.

2. (currently amended) Imaging method for nuclear magnetic resonance according to ~~the preceding~~ claim 1, wherein a one-dimensional Fourier transformation is used.

3. (currently amended) Imaging method for nuclear magnetic resonance according to ~~one of the preceding claims~~

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claim 1, wherein the additional field is described by surface-filling or space-filling curves, there being a biunique correlation between field strength values and point of the grating for these curves.

4. (currently amended)   Imaging method for nuclear magnetic resonance according to ~~one of the preceding claims~~ claim 1, wherein several areas of the sample are measured at the same time.

5. (currently amended)   Imaging method for nuclear magnetic resonance according to ~~one of the preceding claims~~ claim 1, wherein echoes are generated.

6. (currently amended)   Imaging method for nuclear magnetic resonance according to ~~the preceding~~ claim 5, wherein the additional field changes its sign over time for generating the echo.

7. (currently amended)   Imaging method for nuclear magnetic resonance according to ~~one of the preceding claims~~ claim 1, wherein the additional field is described by a Hilbert curve.

8. (currently amended) Imaging method for nuclear magnetic resonance, ~~wherein~~ comprising generating a spatially detectable transversal magnetization ~~is generated~~ signal in a sample, reading the signal ~~is read out~~ along a fractal space-filling trajectory during ~~the~~ a data acquisition phase, ~~and~~ forming a raw-data matrix ~~is formed~~ and determining an image ~~is obtained~~ from the raw-data matrix by means of Fourier transformation.

9. (currently amended) Imaging method for nuclear magnetic resonance according to ~~the preceding~~ claim 8, wherein the fractal space-filling trajectory is described by a Hilbert curve.

10. (currently amended) Imaging method for nuclear magnetic resonance according to ~~one of the preceding claims 8 or 9~~ claim 8, wherein the data acquisition takes place in segments.

11. (currently amended) Imaging method for nuclear magnetic resonance according to ~~one of the preceding claims~~ claim 8, wherein an image coding takes place in three dimensions.

12. (currently amended) Imaging method for nuclear magnetic resonance according to ~~one of the preceding claims~~ claim 8, wherein parts of a measuring set-up are moved past the sample or through the sample or segments of the magnetic field(s) are activated successively.

13. (currently amended) Device for executing the method according to ~~one of the claims 1 to 7~~ claim 1, comprising a constant static magnetic field acting on a sample, means for generating an additional field that is superimposed upon the static magnetic field and that has, in at least one grating surface within the sample volume, different field strength values at each point of the grating surface, means for generating a high-frequency electromagnetic alternating field whereby the sample is excited, means for reading out the electromagnetic radiation emitted by the excited sample, and means for evaluation and image generation.

14. (original) Device according to claim 13, wherein the means for generating an additional field comprise a micro coil arrangement.

15. (currently amended) Device for executing the method according to ~~one of the claims 8 to 12~~ <u>claim 8</u>, comprising means for generating a spatially detectable transversal magnetization in a sample, means for data acquisition of a signal along a fractal space-filling trajectory, means for data evaluation forming a raw-data matrix from the acquired data and obtaining an image from the raw-data matrix by means of Fourier transformation.